

Prasad R Akkapeddi

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 01/20/2004.
2. The allowed claim(s) is/are 1-19.
3. The drawings filed on 17 November 2000 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some* c) None of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the

* Certified copies not received:

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) hereto or 2) to Paper No./Mail Date ____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of
Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892) 5. Notice of Informal Patent Application (PTO-152)
2. Notice of Draftperson's Patent Drawing Review (PTO-948) 6. Interview Summary (PTO-413),
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date ____ 7. Examiner's Amendment/Comment
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material 8. Examiner's Statement of Reasons for Allowance
9. Other ____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see amendments to claims, filed 01/20/2004, with respect to claims 1-19 have been fully considered and are persuasive. The rejection of 10/20/2003 has been withdrawn.

Allowable Subject Matter

2. Claims 1-19 are allowed.
3. The following is an examiner's statement of reasons for allowance:

A search of the prior art did not disclose a method of filling a liquid crystal material into a liquid crystal panel and a system of filling a liquid crystal material into a liquid crystal panel comprising a combination of structural elements, more specifically:

- (a) Preparing an indentation (113) that is indented from a side of the lower substrate to the injection port (see Fig. 7 of the instant application).
- (b) Inserting the protruded portion of a tray into the injection port and
- (c) Introducing the liquid crystal material into the liquid crystal panel through the protruded portion and the injection port.

The uniqueness of the invention is in the indentation on the lower substrate. Conventional techniques of filling the liquid crystal material, as taught by the following references, include a lower substrate and an upper substrate, a seal in between the two substrates having an injection port. The two substrates

are then attached and brought into contact with a reservoir containing the liquid crystal material. The liquid crystal material then fills the panel via capillary action.

(a) Inoue et al. (U.S.Patent No. 6,285,435) discloses two flat substrates (210 and 202) with a seal (203) having an injection port (203a) (Fig. 15).

(b) Nakamura et al. (U.S.Patent No. 5,835,181) also teaches that the substrates (11 a and 11b) with a seal (10) having an injection port (12) (Fig. 9).

(c) Yokoyama et al. (U.S.Patent No. 5,751,391) also teaches a pair of substrates with a seal (11) and an injection port (2) (Fig. 6).

(d) Yoshida et al. (U.S.Patent No. 5,583,671) also teaches a pair of substrates (1 and 2) with a seal (3) and an injection port (3a) (Fig. 6A).

Hence, none of the prior art including the ones cited earlier teaches an indentation in the lower substrate that is indented to the injection port.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 571-272-2285. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prasad R Akkapeddi, Ph.D
Examiner
Art Unit 2871


DUNG T. NGUYEN
PRIMARY EXAMINER